JPRS 77726

1 April 1981

Translation

SOVIET SCIENCE AND TECHNOLOGY POLICY

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SOVIET SCIENCE AND TECHNOLOGY POLICY

This non-serial report contains selected translations of Russian articles on the planning and administration of Soviet research and development and the introduction of scientific achievements into industry.

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PARTY OFFICIAL DESCRIBES ADMINISTRATION OF SCIENCE IN UKRAINIAN REPUBLIC

Kiev KOMMUNIST UKRAINY in Russian No 10, Oct 80 pp 27-37

[Article by F. M. Rudich, chief of the department for science and educational institutions of the Ukrainian Communist Party Central Committee: "Leninist Principles of Controlling Scientific-Technical Progress under Today's Conditions"]

[Excerpt] In the Ukrainian SSR in the period following the 25th CPSU Congress, a number of measures have been implemented that have been directed toward improving the control of science and scientific-technical progress. Leninist principles of control, creatively developed by the party, are the foundation of these measures.

In organizing this work, party and state bodies of the republic proceed from the national plan for scientific projects determined by the USSR Academy of Sciences and the USSR State Committee for Science and Technology. At the beginning of the five-year plan, the Ukrainian Communist Party Central Committee and the republic Council of Ministers adopted the decree, "On Certain Measures for Further Improvement in the Control of Scientific-Technical Progress in the Republic." Implementation of the provisions of this decree aided the development of a more effective mechanism and a unified system for organizing scientific-technical achievements on a republic scale. There was a significant expansion in the role of the UkSSR State Planning Committee as the organization responsible for scientific-technical progress in the republic and as an active participant in its practical control. Scientific-technical progress groups have been created in each UkSSR Gosplan divisions that correspond to the economic sectors. All proposals for the introduction of new scientific results into practice now must go to UkSSR Gosplan which, together with ministries and agencies, is asked to provide comparative analysis of them, to organize experimental-industrial testing, to determine the necessary scale for introduction, and to assure that they find their embodiment in the national economic plan. General management of the work of ministries and agencies of the republic in utilizing the achievements of scientific-technical progress in the economy is entrusted to the chairman of the UkSSR Council of Ministers, who also heads a commission of the presidium of the UkSSR Council of Ministers for such questions. A Republic Council for the Coordination of Scientific Research in the Fields of Natural and Social Sciences has been created, with the president of the UkSSR Academy of Sciences at its head.

Thus, the task of further improving the state-level system of introducing the achievements of science into practice has been laid down and is being persistently accomplished.

All this is yielding definite positive results, although they are not as appreciable as they should be. The debits become apparent in that scientific-technical potential still does not provide full return either in the lengths of time it takes to introduce individual scientific developments or on the scale in which this introduction is organized or, finally, in how much the level of science is taken advantage of in making administrative decisions.

One of the main directions toward more effective solutions to these problems is the intensification of activity by academy and other scientific institutions of the republic and the strengthening of their ties with production.

The CPSU Central Committee, during the period after the 25th CPSU Congress, has twice addressed the experience of the Ukrainian Academy of Sciences and has recommended it for wide application. A high evaluation of the work of republic scientists was given by the general secretary of the CPSU Central Committee, Comrade L. I. Brezhnev: "Implementing continuous planning of all projects -- from scientific idea to its practical embodiment, Ukrainian scientists are achieving a substantial shortening of time in introducing scientific research results into practice" (Leninskim kursom, vol. 6, p. 305).

In April 1976, speaking at a session of the general assembly of the UkSSR Academy of Sciences, Comrade V. V. Shcherbitskiy, member of the Politburo of the CPSU Central Committee and the first secretary of the Ukrainian Communist Party Central Committee, said: "Not detracting at all from the importance of fundamental research, on the contrary, stressing it, because its development feeds the deep flow of scientific-technical progress, we still think that the currently dominating position in these plans should be that of subjects that provide an increase in effectiveness now in this five-year plan and in the near future." Such an orientation has fully justified itself.

What are the basic results of the work that has been done?

First. Guided by the principle of concentrating efforts on the accomplishment of the main tasks, /the republic academy has concentrated available efforts and resources first of all on those areas in which its institutes are or can be leaders in the country in the shortest time/[in boldface]. Such an approach has permitted progress to the forefront of scientific research and the strengthening of ties with practice. In doing this, it is apparent, the opportunity is not excluded for opening new areas dictated by the logic of scientific development or the needs of the economy.

The strategy that has been developed for organizing scientific research has permitted the UkSSR Academy of Sciences to deepen fundamental research and has provided accelerated development of more long-range areas that aid the substantial increase in the effectiveness of civil production. Among the areas that determine the more striking features of the academy's appearance today, one must name a wide complex of work in materials, physics, nuclear theory, mathematics, cybernetics, mechanics, chemistry, radio physics and electronics, neurophysiology, biology, and a number of others. The fundamental research that has been conducted has been the basis for creating qualitatively new and effective technology that radically changes the process of production.

A number of projects under such a plan have been accomplished by the collective of scientists of the Institute of Electric Welding imeni Ye. O. Paton. Thus, world recognition has been received by electroslag technology, which has given rise to a new branch of industry -- electrometallurgy. One must recall also the new technology for welding pipeline of large diameter, put into construction practice by the creation of a powerful complex, which works successfully under conditions in the extreme north, welding 6 to 8 pieces an hour and raising labor productivity by a factor of 8. Each such plant provides an economic effect of 800 thousand rubles a year. Other examples can also be introduced.

The results of fundamental research done in republic academy institutions in creative cooperation with scientists of the USSR Academy of Sciences and academies of union republics have permitted the creation also of a number of other conceptually new technological processes that are being successfully used in metallurgy, machine building, power, the chemical and medical industries, and agricultural production.

Second. Practice has proved the vitality of /new forms of organization for cooperation between science and production/[in boldface]. Among these forms are:

-- joint complex plans for research and introduction on the scale of an economic sector, approved by the presidium of the UkSSR Academy of Sciences and by boards of the appropriate ministries. At the beginning of the 10th Five-Year Plan there were a total of 5 such plans at the level of the Academy of Sciences and ministries; now there are 16.

-- complex scientific-technical programs being fulfilled in the interests of large production associations and enterprises. Initiators in this operation have been scientific institutions of the UkSSR Academy of Sciences and the "AvtoZIL" association. In the programs, concrete time periods have been determined, and an efficient sequence for work fulfillment -- from scientific-research developments to series production of finished products -- has been provided for. Cooperation of scientists and producers under such programs is receiving wide acceptance.

Developing fundamental research, academy institutions are concentrating efforts on the development of topics that have important economic significance. With this aim, complex scientific-technical and social-economic programs are being implemented.

Third. An active factor that aids the effectiveness of scientific research is a /new form of organizing research/[in boldface], the basis for which is the principle of differentiated approach. Practice shows that to provide rapid introduction of scientific research results, it is necessary to have a definite ratio between the number of scientists who conduct fundamental and applied research and the number of designers and technologists who work on the practical embodiment of scientific ideas in new machines and technologies. There should be substantially more workers in the latter category than in the former. In practice, however, this ratio is frequently not maintained.

The Academy of Sciences of the republic has made a start in creating powerful scientific-technical associations. At present, actually, a new type of institution is springing up -- the academy scientific-technical association.

Such associations are operating at the Kiev academy institutes of electric welding, superhard materials, and problems of materials sciences, and the formation of such associations is being completed at the institute of cybernetics, the Khar'kov institutes of radiophysics and electronics and of low temperatures, the L'vov physical-mechanical and Donetsk physico-technical institutes. It is important to stress that such associations not only provide uninterrupted transition from the origin of a scientific idea to the fabrication of an experimental model, but also create conditions for substantially raising the level of fundamental research, and achieve great mobility and equipping an experiment with high-level technology.

It must be noted that a number of organizational and legal complications have arisen in connection with the formation of these associations. These complications arise because an association includes organizations with differing sources of financing and systems for paying wages and with their own administration, accounting offices, supply and personnel sections, etc. The traditional system of providing materials and supplies to enterprises does not fit the new scale of experimental shops. It has proven to be impossible to apply the Statute on Scientific-Production Associations to the work of academy institutions. Unfortunately, the solution of these problems, which lie within the competency of national bodies, has dragged on.

As a whole, the activities of the scientific collectives of the UkSSR Academy of Sciences have shown a marked influence on hastening the rates of scientific-technical progress. Whereas in the 8th Five-Year Plan 1280 developments were introduced into the economy with an economic effect of about 450 million rubles, more than 2700 completed developments were introduced during the 9th Five-Year Plan with an economic effect of about 900 million rubles, that is, it doubled. During the four years of the present five-year plan, academy scientists have introduced the results of 2230 scientific developments into practice, with an economic effect of over 1 billion rubles. In this case, for each ruble invested in an applied development, there was a return of over 5 rubles.

And there is still another important result. In recent years, there has been an increase in the civic activity of scientific workers and in their ability to approach the problems of scientific-technical progress from national positions and, very importantly, the psychological atmosphere in the republic Academy of Sciences has become creative and more exacting.

The further expansion of the scientific-technical revolution requires substantial strengthening of relations between science and production and the deep study and wide diffusion of advanced experience in introducing scientific developments into practice under socialist management. The return from science can and must be greater.

Improvement of the mechanism for controlling the development of science and scientific-technical progress is an extremely urgent problem. The level of research into this subject is still significantly lower than the degree of development of questions of controlling socialist society and is far from fully responding to today's needs. These are problems that require further study.

One of these problems is /the development of a mechanism for the formation and control of complex scientific-technical programs of various levels/[in boldface]. In this five-year plan, in the Ukrainian SSR, 79 republic scientific-technical programs have been implemented. Analysis has revealed that these programs do not fully provide for solutions to key problems for the development of the economy. Here and there are manifestations of tendencies to increase the quantity of programs; there is a striving to fulfill all research and development only within their framework. It seems that the number of programs at all levels (among economic sectors, within economic sectors, within regions, and within ministries or agencies) must be clearly determined. It is necessary that such programs be directed toward the solution of basic problems involved in increasing the effectiveness of civil production.

At present, state bodies and scientific institutions have been given the task of formulating scientific-technical programs for the 11th Five-Year Plan. We are speaking here of developing republic interagency scientific-technical and social-economic programs along such key lines of economic development as improving the technical base of the power complex and the metallurgical industry, raising the effectiveness of agricultural production, the rational utilization of labor, and others.

We must create an effective system of programs and control over their implementation, a system that provides not only for planning scientific research (which, in the republic as in the country as a whole, is accomplished at quite a high level), but also for rapid utilization of their results in practice. In other words, we need to create a real operational mechanism for controlling the introduction of scientific achievements into production.

Of course, without serious study, the creation of methodology for formulating programs will not solve this important problem.

Practice places another problem before science: /finding the right combination in controlling scientific-technical progress between the principles of control by geographical areas and control by economic sectors/[in boldface].

In our republic, local party bodies have accumulated interesting experience in bringing science and production together. In Kiev, for example, a system of nongovernmental bodies has been created for controlling scientific-technical progress. A number of commissions function under the management of the Council for Hastening Scientific-Technical Progress. Some of them are specialized in relatively narrow fields of technology -- metal casting, application of superhard materials, welding of metals, and utilization of computer technology; others are oriented toward whole economic sectors. More than 500 scientists and specialists are involved in the commissions and councils. For the creation of nongovernmental bodies for controlling scientific-technical progress on a regional scale, the experience of the L'vovskaya Oblast Committee of the Ukrainian Communist Party deserves attention and dissemination.

The social consequences of developing a system of such bodies are great, because here, in fact, scientists, engineering-technical workers, and advanced workers are actively and creatively solving the problems of controlling scientific-technical progress, and for them, this work -- and this is extremely important -- is a form of public activity.

In hastening scientific-technical progress, an important role is played by the primary party organizations of scientific institutions and enterprises: first of all, by exercising regular control on the part of party bureaus of institutes and enterprises over the work of the communists who head commissions, complexes, and associations; secondly, by arranging thorough contacts between the party organizations of scientific-research institutes and industrial enterprises.

Thus, in both Kiev and L'vov, essentially under the management of party committees, bodies are being created for controlling scientific-technical progress within the boundaries of a city or oblast outside the governmental structure without -- and this must be emphasized -- interfering with the vertical administrative subordination of institutions and enterprises; extremely effective horizontal scientific-technical ties are being organized and in the end, they are performing as effective levers for combining control by region with control by economic sector.

Much is being done on this score by councils of the Dnepropetrovsk, Donetsk, Khar'kov, and Southern Scientific Centers of the UkSSR Academy of Sciences. The scientific centers are becoming bodies for coordination among economic sectors, working under the aegis of the Academy and relying on its high authority. In the post-congress period in all of the scientific centers and in Kiev, meetings of leaders took place in which agreements were adopted for creative cooperation between scientists and producers.

The activities of bodies for controlling scientific-technical progress on a regional scale deserve careful study, the generalization of experience, and further development. In particular, the law must be more clearly defined, and so must the duties of academy scientific centers.

And there is this kind of problem. At present, 190 thousand scientific workers are working in the Ukrainian economy; among them are 4.8 thousand doctors of sciences and 56 thousand candidates of sciences. The leading scientific organization is the UkSSR Academy of Sciences. In its scientific institutions work over 13 thousand scientific associates, including 350 academicians and corresponding members, over a thousand doctors of sciences, and almost 6.5 thousand candidates of sciences. As analysis has shown, in the recent period, the rate of growth in number of workers occupied in science and science services has grown each year. These rates reached their peak at the beginning of the 1960's (at that time the number of scientific workers doubled in 5 years) and, since then, a tendency toward their stabilization has been noted. According to estimates by specialists on science, Soviet science in the next 20 years will reach the level where the volume of scientific-technical tasks that will have to be accomplished will increase by a factor of 3 or 4, but the total number of scientific personnel will grow by a factor of 1.5 to 1.7.

The accomplishment of these very complicated but extremely important tasks is possible only under conditions of significant intensification of the process of research itself. /Special attention must be given to the quality of training scientific workers and to attracting talented young people to science/[in boldface].

In the UkSSR Academy of Sciences work 11.3 thousand communists who make up 103 primary party organizations. Every third scientific worker is a member of the CPSU. The composition of party committees and bureaus has been substantially strengthened. All secretaries of party organizations of academy institutes are doctors or candidates of sciences. All this helps increase the authority and strengthen the influence of party organizations. One of the most important of their tasks is the selection and training of young talents and the creation of new scientific schools and the strengthening of existing ones. In this plan, it is necessary to stress the role and responsibility of important scientists, who are asked to be the self-sacrificing heroes of science. " . . . Heroes, like the sun, are needed," wrote A. P. Chekhov. "Being the most poetic and cheerful element of society, they excite, comfort, and ennoble. Their personalities are living documents, demonstrating to society that, aside from the people who carry on the battle between optimism and pessimism, write unimportant stories out of boredom, unneeded designs, or worthless dissertations . . . there are still people of another kind -- people of action, faith, and clearly acknowledged purpose." (Sobraniye sochineniy v 12-ti tomakh [Collected Works in 12 Volumes], Moscow, 1956, vol. 10, p. 390.)

The training of doctors of sciences and of scientific personnel through formal postgraduate training requires strict attention. We are speaking about increasing the effectiveness of dissertation projects but, most importantly, about inculcating in those who complete postgraduate programs the abilities and skills for conducting research at an up-to-date level with the aid of the latest scientific instruments and for introducing the accomplishments of science into production.

In academy institutes a definite system for this work has been created. This consists of practice training for students of the upper classes, probational work by graduates, and recommendation for postgraduate training for those who have shown promise. The molding of beginning researchers is aided by scientific seminars and the activities of young scientists' councils.

At the same time, it must be noted that experience in the training of the young scientific generation is not studied very much; publications on these subjects are virtually nonexistent.

We must concentrate efforts of party and state bodies, collectives of scientific institutions, and their party organizations on the solution of these and other problems.

Scientific research and practical experience convincingly demonstrates that Leninist principles of controlling science and scientific-technical progress lie at the foundation of the work being done. All of the forms of work that are arising and are successfully developing under contemporary conditions serve as clear confirmation of the vitality of these principles, permit deeper penetration into them, and make them sparkle with new facets.

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ZHUCHENKO REVIEWS WORK OF MOLDAVIAN ACADEMY OF SCIENCES

Kishinev SOVETSKAYA MOLDAVIYA in Russian 23 Nov 80 p 2

[Interview with Aleksandr Aleksandrovich Zhuchenko, president of the Moldavian Academy of Sciences and a corresponding-member of the USSR Academy of Sciences, by an unidentified correspondent of SOVETSKAYA MOLDAVIYA: "The Complex Approach Plus Coordination"]

[Text] ". . . To concentrate the attention of scientists on the most important problems of scientific-technical and social progress, on the solution of which to a large degree depend the successful development of the economy, culture, and science itself. To provide for the further development of research that opens conceptually new routes to and possibilities for the transformation of the productive forces of the country and for the creation of engineering and technology for the future.

"To increase the effectiveness and quality of scientific research. To provide for further improvement in the forms of interrelations between science and production. To hasten the introduction of scientific achievements into the economy." This is the way that the decisions of the 25th CPSU Congress spelled out the main paths for the development of Soviet science.

Showing tireless concern for Soviet science, in the period between party congresses, the party has consistently oriented scientists toward the solution of the most urgent problems. Clear evidence of this are the decrees of the CPSU Central Committee that analyze and generalize upon the experience of the Ukrainian Academy of Sciences and the Siberian Department of the USSR Academy of Sciences and the decree of the Central Committee of the Moldavian Communist Party and the Moldavian Council of Ministers, "On the Further Improvement in Planning Scientific-Research Work and Hastening the Introduction of Its Results into Production."

The five years are coming to an end. It is time to sum up the results. What has been accomplished during these years? How has the collective of the Academy of Sciences implemented these very important party documents?

The decree of the Moldavian Communist Party Central Committee and Moldavian Council of Ministers "On the Further Improvement in Planning Scientific-Research Work and Hastening the Introduction of Its Results into Production" placed conceptually new tasks before science in Soviet Moldavia. A special role in this is assigned to the chief scientific center of the republic, the Moldavian Academy of Sciences.

A. Zhuchenko, president of the Moldavian Academy of Sciences and a corresponding-member of the USSR Academy of Sciences, talks with a correspondent of SOVETSKAYA MOLDAVIA about how academy scientists are implementing the tasks put before them by the decree.

[Question] First of all, Aleksandr Aleksandrovich, what is noteworthy about science in the republic at its present stage of development?

[Answer] During the present five-year plan, the work of Moldavian scientists has been directed toward fulfillment of the historic decisions of the 25th CPSU Congress and of the 16th Moldavian Communist Party Congress.

During these years, scientific research in the republic was raised to a higher level, its effectiveness was increased, and there was growth in the qualifications of scientific personnel. Results of the research of Moldavian scientists are making an increasing contribution to deepening our knowledge of nature and society, to the further improvement of control over complicated social processes, and to the creation of progressive technologies, new machines and mechanisms, instruments and equipment, and to the accomplishment of tasks for the food-producing complex and the conservation and rational utilization of natural resources . . .

In accord with the decisions of the Moldavian Communist Party Central Committee and the republic government, the basic directions for research and the structure of each scientific institution of the academy have been specified, transition to the program-goal principle of planning scientific-research and experimental-design work has been ensured, the level of fundamental research has been raised substantially, and the ties of academy institutions with nonacademy institutes, scientific-production associations, ministries, and agencies have been strengthened. The experimental production base of the academy has been developed, a rapid growth of experimental-design work has been assured, and sponsoring enterprises have been determined.

In accord with the complex plan for introducing new technology, academy scientists during the last five years have implemented 385 projects, which is twice as many as during the 9th Five-Year Plan. In this connection, I would like to stress particularly the importance of projects for the introduction of facilities for electric spark hardening of machine components and tools, for means of extracting juices from organic raw materials, for mathematical support to planning and management in the sugar beet industry of the republic, and for other activities.

I must also stress the great theoretical and practical significance of research by social scientists of the academy in the fields of history, economics, language and the literature of philosophy and law, ethnography, and art.

Along with the further development of research in the fields of solid state physics, coordination compounds in chemistry, modern algebra and mathematical logic, in which original scientific schools have arisen, work has been significantly strengthened in the fields of climatology, landscaping, construction of agrobiological stations, ecological genetics, programmed harvest of agricultural crops, and the preservation, transportation, and processing of vegetative raw materials.

A large amount of attention is given in all academy institutes to raising the level of fundamental sciences. A central place in this is occupied by questions that relate to creating problem-oriented complexes, instruments, and equipment that permit the automation of experiments, that is, that raise significantly the labor productivity of scientific workers. The practical realization of this program is being brought about by scientists of institutes and engineering-technical personnel from the Center for Automation of Scientific Research and Metrology. Already, a number of unique information and measuring systems have been created for dialog processing and the registration of experimental data, and the coefficient of utilization of unique equipment has been increased through the creation of centers for collective use.

[Question] Almost two and a half years have gone by since the well-known decree of the Moldavian Communist Party Central Committee and Council of Ministers came into being. What, in concrete terms, has been done on the plan for its realization?

[Answer] The decree provided for the formation in the republic of a new system of organization and management of science and permitted the concentration of scientific resources on the solution of the chief scientific problems of significance for the whole republic. In this connection, interagency coordination achieved a material base both in the form of centralized financing for complex problems and also by creating experimental-production bases at 33 base enterprises and farms. In accord with the decree, 15 republic interagency problems were approved, 13 of which have scientific-research institutions of the academy as head institutions.

For all the problems, complex programs have been developed for the 11th Five-Year Plan, implementing parties have been specified, and stages have been designated for practical realization of completed projects. An important condition for fulfillment of republic problems has been the realization of complex programs that provide for the solution of more narrow tasks in the interests of ministries and agencies. Such programs have been approved at joint meetings of the Moldavian Academy of Sciences and collegia of the Ministries of Agriculture, Food Industry, Land Reclamation and Water Resources, Motor Transport, and the Moldavian Main Administration for Power and Electrification and the State Committee for Agricultural Equipment.

The role of the academy in coordination has grown in the fields of social and natural sciences. This has permitted the strengthening of ties of academy institutions with higher educational institutions and with institutes of economic sectors and increasing the depth and practical significance of theoretical research being done by scientists of the republic.

At the same time, experience shows that the effectiveness of interagency coordination can be significantly higher. This, in turn, requires a large amount of attention toward republic-wide problems on the part of ministries and agencies, an increase in communication and activity by researchers, and a fuller reflection of interagency programs, especially in their practical implementation in economic plans.

[Question] Evidently, the principal positions of the plan of work for scientists in the 11th Five-Year Plan have already taken shape. What can you say about it?

[Answer] In the 11th Five-Year Plan, the efforts of academy scientists will be concentrated on the solution of three basic groups of social-economic and natural-science problems. These are: the analysis of current processes and phenomena of social life, planning, and forecasting the development and distribution of the productive forces of the republic; the creation of new materials and technology that allow high rates of scientific-technical progress in the food and processing industries, instrument and machine building, metal working, and other sectors; and the accomplishment of tasks relating to the conservation and rational utilization of the natural resources of Moldavia. A central place among these problems is allotted to questions relating to the further development of the agrarian-industrial complex under conditions of its intensification, interagency cooperation, and large-scale concentration.

The characteristic features of the academy plans for scientific-research projects for the 11th Five-Year Plan are the further actualization of subject plans, orientation toward large problems having republic-wide significance, and the concentration of efforts and resources on the main directions. One can say that a large part of fundamental research is oriented toward providing high rates of scientific-technical progress in the basic sectors of the economy.

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NEW DECREE EXPANDS ROLE OF UKRAINIAN SCIENTIFIC CENTERS

Kiev PRAVDA UKRAINY in Russian 10 Jan 81 p 1

[Report: "In the Central Committee of the Ukrainian Communist Party and the UkSSR Council of Ministers: On Certain Measures for Increasing the Effectiveness of the Activity of the Scientific Centers of the UkSSR Academy of Sciences in the System for Controlling Scientific-Technical Progress"]

[Text] The Central Committee of the Ukrainian Communist Party and the UkSSR Council of Ministers have examined the activity of scientific centers of the UkSSR Academy of Sciences and measures directed toward raising the effectiveness of their work and their role in the system for controlling scientific-technical progress in the various regions of the republic.

In the decree that was adopted, it is noted that the UkSSR Academy of Sciences, fulfilling the decisions of the 25th CPSU Congress with active support from oblast party committees, has conducted significant work in the development of fundamental research and in concentrating the efforts of scientific-research institutions and higher educational institutions on the solution of scientific-technical problems that have important significance for the development of the economy in the various regions and oblasts of the republic.

In the activity of scientific centers, increasing significance is being acquired by questions relating to the coordination of scientific-technical projects, the formation of regional scientific-technical goal programs, and the development of complex plans for creative cooperation between scientific and production collectives. They are successfully supplementing the existing ministerial system for controlling the economy, by strengthening interagency scientific and technical relations within regions.

Local party and governmental bodies have accumulated a significant amount of experience in organizing cooperation between enterprises and scientific institutions, on the one hand, and councils of scientific centers of the UkSSR Academy of Sciences, on the other, and in encouraging, with aid from the party and economic leaders of the region, participation in the solution of urgent scientific and technical problems. With active participation by the scientific centers, bodies for controlling scientific-technical progress are being created under oblast party committees outside the governmental framework.

At the same time, significant scientific potential in the regions is still not being sufficiently utilized for increasing the effectiveness of civil production. Possibilities for scientific centers to concentrate the efforts of scientists on the solution of urgent problems are still not being realized.

The Central Committee of the Ukrainian Communist Party and the UkSSR Council of Ministers have decreed that one of the chief tasks of the scientific centers of the UkSSR Academy of Sciences is considered to be the concentration of efforts by scientific and scientific-technical workers of the region on the solution of the basic problems in increasing the effectiveness of civil production through the comprehensive intensification and hastening of scientific-technical progress. A number of measures have been specified for further improvement in the system for controlling scientific-technical progress within the regions and oblasts of the republic, for the activation of the work of the scientific centers of the UkSSR Academy of Sciences as interagency science coordination bodies, and for the strengthening of their role in mobilizing scientific collectives for the solution of urgent scientific-technical problems having important economic significance.

Approval was given to the practice of concluding agreements for scientific-technical cooperation between the UkSSR Academy of Sciences and enterprises and organizations located on the territory of the oblasts, the scientific activities within which are coordinated by the scientific centers of the UkSSR Academy of Sciences, and to the practice of making complex plans for such cooperation. Control over the fulfillment of these plans is entrusted to oblast party committees, to the Kiev city party committee, and to the scientific centers of the UkSSR Academy of Sciences.

The scientific centers of the UkSSR Academy of Sciences, with the agreement of corresponding oblast party committees, are given the right to attract scientists and economic specialists to work in scientific councils, commissions, and other working groups of responsible workers and, in their activity, to actively utilize councils of scientific-technical societies, the All-Union Society of Inventors and Rationalizers, and territorial centers of scientific-technical information.

The UkSSR Ministry of Higher and Secondary Specialized Education, the UkSSR Ministry of Health, the UkSSR Ministry of Education, and economic ministries and agencies are asked to provide for active participation by subordinate institutions in the work of the scientific centers of the UkSSR Academy of Sciences.

The UkSSR Academy of Sciences and the UkSSR Ministry of Higher and Secondary Specialized Education, with agreement from oblast party committees, oblast executive committees, and interested ministries and agencies, must form in the first quarter of 1981 in all oblasts of the republic where councils of the scientific centers do not operate, scientific-coordination councils to be entrusted with the development of complex plans for scientific-technical progress and with the organization of their fulfillment through the total efforts of scientific and design organizations, higher educational institutions, and enterprises of the oblast. Approval was given to a list of sponsoring organizations for all such councils. Management of the scientific-coordination councils will be accomplished by oblast party committees and the scientific centers of the UkSSR Academy of Sciences.

It is recommended that the UkSSR Academy of Sciences provide for the development, in the scientific centers, of scientific research for the solution of regional problems in controlling scientific-technical progress. For the fulfillment of the designated research, the organization of scientific laboratories in each of the centers and in Kiev is recognized as expedient.

A decision was adopted on the organization of the Northwest Scientific Center of the UkSSR Academy of Sciences, the council for which will be located in Kiev. The authority of the Northwest Scientific Center will encompass Kiyevskaya, Zhitomirskaya, Vinnitskaya, Khmel'nitskaya, Cherkasskaya, and Chernigovskaya Oblasts. The Dnepropetrovsk Scientific Center of the UkSSR Academy of Sciences is renamed the Dnepr Scientific Center, and the Khar'kov Scientific Center is renamed the Northeast Scientific Center.

The presidium of the UkSSR Academy of Sciences is called upon to introduce changes in the status of the scientific centers that arise from the decree.

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BELORUSSIAN GOSPLAN CHIEF ON TIES BETWEEN SCIENCE AND INDUSTRY

Moscow IZVESTIYA in Russian 31 Dec 80 p 2

[Article by V. Gvozdev, first deputy chairman of the Council of Ministers of the Belorussian SSR and chairman of the Belorussian State Planning Committee: "To Strengthen the Relationship Between Science and Production"]

[Text] The CPSU Central Committee draft for the 26th CPSU Congress, "Basic Directions for the Economic and Social Development of the USSR for 1981 to 1985 and for the Period to 1990," in connection with the 26 to 29 percent increase in the production of industrial products in Belorussia, provides for growth in machine-building products by a factor of 1.5. Radio engineering, electronics, and instrument making will develop at outstripping rates. Broad prospects are opening up for machine building in our republic.

One of the most important features of machine-building development in Belorussia at the present stage is the further concentration and specialization of production. Here, I would like to stress the great significance of creating production associations and scientific-production associations.

In recent years, a whole complex of measures for strengthening ties between science and production have been put into effect in the republic. Goal programs for joint research and development and economic agreements for creative cooperation have been developed and spread. Educational-scientific-production associations, sector-oriented laboratories at higher educational institutions, and scientific-production laboratories at the Belorussian Academy of Sciences have been created and are functioning. The economic effect from introducing into production scientific research results that have been achieved at the Belorussian Academy of Sciences, at republic higher educational institutions, and at scientific institutions of ministries and agencies during the years of the 10th Five-Year Plan, has been about 800 million rubles.

Belorussian automobile builders and republic scientists are constantly broadening and improving forms for cooperation. The scientific-production association, "Engineering and Physics-Mathematics Institutes of the Belorussian Academy of Sciences and Enterprises of Belavtomaz" (abbreviated "Avtofiztekh") is operating for the second year. Within the framework of the association, the design and manufacture of heavy automobile technology are being improved, and its reliability and durability are being increased. Such close cooperation is mutually advantageous to both scientists and producers. However, we will be self-critical: in the work of the scientific-production association, we have many unsolved problems.

I would like to make the following proposal. In our view, the draft "Basic Directions for the Economic and Social Development of the USSR for 1981 to 1985 and for the Period to 1990," should contain the thought that

> scientific-production associations within the framework of a single complex open broad opportunities for the most rapid introduction of research into practice. And if the association is provided a powerful scientific potential, the effect will undoubtedly be even greater.

Collectives of a group of machine-tool builders of Belorussian enterprises have proposed to promote socialist competition to raise significantly the technical level and competitiveness of equipment being manufactured on the basis of creative cooperation with scientific institutions, design organizations, and cooperating enterprises. Thus, the Minsk production association for the manufacture of automatic lines, together with a number of institutes of the Belorussian Academy of Sciences and other scientific and design organizations, is conducting work on the automation of design and technological preparation of production and for mathematical modeling and forecasting of the reliability and durability of equipment being produced. The association has concluded agreements with many cooperating enterprises. This permits shortening the time required for designing and assimilating the production of new technology.

In the 11th Five-Year Plan, as in the 10th Five-Year Plan, scientific-technical progress will find its concrete embodiment in the creation and introduction of qualitatively new, more productive machinery and equipment. And here, Belorussia in the next five years will come up with good scientific output which will undoubtedly have a positive influence on further development of machine building.

Along with the successes achieved in machine building, there are also many problems that we will have to solve in the 11th Five-Year Plan. A significant portion of products has not been improved for a long time. The proportion of items manufactured for over ten years in the republic as a whole in 1979 was 22.2 percent, including 56.9 percent for enterprises of the USSR Ministry for Chemical and Petroleum Machine Building, 35.1 percent for the Ministry of Tractor and Agricultural Machine Building, and 32 percent for the Ministry of the Automotive Industry. The solution of these problems depends not only on the republic but also on USSR organizations. Above all, in our view

> it is necessary that the USSR ministries examine the lists of products and take immediate measures to update them.

This will permit opportune and purposeful reconstruction and re-equipping of engerprises, guaranteeing output of products at world levels of achievement.

There is still another problem. Individual long-range developments being carried out in republic scientific institutions are being introduced slowly into practice.

Certain USSR ministries do not give them needed attention. For example, equipment for cross-wedge rolling, created at the Physico-Technical Institute of the Belorussian Academy of Sciences, is being applied only in individual forms. But meanwhile, in the manufacture of a number of components, it is permitting an increase in labor productivity by more than a factor of ten and an increase in the coefficient of metal utilization of up to 0.8 to 0.95. The USSR Ministry of the Machine Tool and Tool Building Industry is still not applying, in equipment being manufactured, the method created by this same institute for magnetic-abrasive treatment and a device for its use.

In the process of discussing the CPSU Central Committee draft, it seems that this subject also deserves attention.

> More effective coordination is necessary in geographical cross-sections of the activities of enterprises and associations, design and technological organizations, and scientific-research institutes on the most important scientific-production problems. It is especially necessary in sectors that are close to one another in types of production.

At first, such functions could be fulfilled by inter-sector coordination councils. Of course, these problems require comprehensive preliminary study in the corresponding organizations with participation by scientists and producers.

Belorussian workers have gained a great victory: in rates of growth in the total volume of industrial production, our republic reached, ahead of time, the level set by the Basic Directions for the Development of the Economy for the 10th Five-Year Plan. Comrade L. I. Brezhnev has congratulated the workers of the Belorussian SSR for their high achievements.

In preparing for the 26th CPSU Congress, the republic sets for itself still greater social and economic tasks. Our plans for each successive five-year plan grow weightier, and our goals still broader. Being supported by the successes achieved, using creatively the experience accumulated during previous five-year plans, and having at their disposal a rich production and economic base, the workers of Belorussian industry will do everything possible to fulfill the great designs of the party with honor.

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IZVESTIYA EDITORIAL URGES CLOSER TIES BETWEEN SCIENCE AND INDUSTRY

Moscow IZVESTIYA in Russian 18 Dec 80 p 1

[Editorial: "Science Into Production"]

[Text] A far-reaching panorama of accomplishments by the Soviet people is laid out in the draft by the CPSU Central Committee for the 26th CPSU Congress, entitled, "The Basic Directions for the Economic and Social Development of the USSR for 1981 to 1985 and for the Period to 1990." The country is studying this document of great theoretical and practical importance with great attention. It shows convincingly that the plans of the party are plans for peaceful creativity.

Especially important significance is attached in the draft to science and technology, which must to a still greater degree be subordinated to the solution of the most important problems in the further progress of Soviet society and to hastening the intensive development of the economy.

The Communist Party has unfailingly given a large amount of attention to the progress of science and to using its achievements in the economy. Soviet scientists are justifiably proud of their contribution to the country's industrialization, to victory over Hitler's hordes, to the elimination of the nuclear monopoly of imperialist states, to peaceful construction, and to the mastery of outer space. The role of science in the development of civil production grows with each five-year plan. At the same time, the tasks being put before the nation's science are becoming larger in scale and more complicated. From the development of the physics of elementary particles to the creation of highly effective new technology, from the knowledge of the most subtle mechanisms of life's activity to the introduction of new types of plants and livestock breeds, from the mastery of outer space to the improvement of the environment -- everywhere, the creative thought of scientists is building paths to practical accomplishments.

The potential for science in the Soviet Union is enormous. And to use it wisely, where it can yield the greatest output for the economy, efforts must be concentrated on the decisive sectors. That is why the draft developed by the CPSU Central Committee for the 26th Party Congress has made provisions for the realization of complex goal programs for the solution of the most important scientific-technical problems.

Science becomes a powerful productive force when its achievements are embodied within a short time in new machines and technological processes and in new instruments and materials. The party document directs scientists and producers and economic managers toward substantial reduction of the time required for the creation and assimilation of new technology. For this, it is necessary to do everything possible to strengthen ties between science and production. The country has accumulated rich experience in such cooperation. The strong, fruitful ties of many institutes of the USSR Academy of Sciences and of the Siberian Department of the USSR Academy of Sciences with a number of branches of industry are widely known; scientists of the Ukrainian Academy of Sciences also cooperate closely with factories and associations. Their experience is worth the widest dissemination possible.

Speaking at the 25th CPSU Congress, Comrade L. I. Brezhnev stressed: "The success of the scientific-technical revolution, its favorable influence on the economy and on all aspects of society, cannot be guaranteed by the efforts of scientific workers alone. An increasing role is being acquired by the involvement in this process of all participants in civil production and of all links in the economic mechanism." That is why the draft Basic Directions puts forward the requirement for increasing the responsibility of ministries and agencies for the level of research in their scientific institutions and for the most rapid utilization of the results of finished scientific developments in production.

As practice shows, one of the most common reasons for delay in the transfer of ideas to series output of new items is the insufficiently careful preparation of experimental models. The draft Basic Directions poses the task of strengthening experimental-production support for scientific-research and planning-design organizations. This will permit scientists and engineers to carry their developments forward to the point where they are fully ready for transfer to industry and, at the same time, to hasten the rate of technical progress. The increase contemplated in the 11th Five-Year Plan in the production of instruments, equipment, means for automation, reagents and preparations for conducting scientific research also will have substantial effect on increasing the effectiveness and quality of work of scientific institutions.

A large reserve for hastening scientific-technical progress lies in fuller utilization of the scientific potential of higher schools for accomplishing economic tasks. About half of all the country's scientists with higher qualifications work in universities and educational institutes. This is a huge force. It is being included more and more in the conduct of important research. Educational-scientific-production associations of higher educational institutions and industrial enterprises are being established on a wide scale. The laboratories and scientific-research institutes oriented toward particular economic sectors that are being established at higher educational institutions have become an effective means for strengthening ties between the scientists of higher schools and branches of industry. The experience accumulated by higher schools will permit the successful realization of the tasks set before them by the Communist Party.

In increasing the creative activity of the scientific and technical intelligentsia, a large role is played by the scientific-technical societies (NTO's) of the country which unite in their ranks about ten million persons. They participate actively in the formation of technical policies in the economic sectors and in the development of competition for successful realization of scientific-technical programs, and they make a noticeable contribution to the national search for new ways to raise labor productivity, to conserve material resources, and to improve the quality of work. The strengthening of the role of NTO's in hastening scientific-technical progress is in prospect in the five-year plan.

The draft Basic Directions for the Economic and Social Development of the USSR for 1981 to 1985 and for the Period to 1990 lays down a broad, concrete program for our moving forward in decisive sectors of scientific-technical progress, which will have its own favorable impact on all branches of the economy. Scientific and engineering collectives are discussing this very important party document with great interest. There is no doubt that in the course of these discussions, valuable proposals and additions will arise that will enrich and concretize our plans for the future.

The political and labor upsurge with which the country's scientific-technical intelligentsia is meeting the 26th CPSU Congress is a pledge that scientists and engineers of the Country of the Soviets will put all their efforts and knowledge into fulfillment of the plans outlined by the party.

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CHROMATOGRAPHY INSTRUMENT PRODUCTION HELD UP BY PROBLEMS IN MINPRIBOR

Moscow MOSKOVSKAYA PRAVDA in Russian 4 Jan 81 p 2

[Article by E. Timofeyeva: "Running in Place, or How One Ministry Created an Institute"]

[Text] I don't know about you, the reader, but I personally have not come across this kind of situation before. The director of the All-Union Scientific Research Institute of Chromatography (abbreviated VNIIkhrom), B. P. Okhitnikov, according to the principle of "multiple hats," occupies yet another position: that of deputy director of VNIIKAneftegaz [All-Union Scientific Research, Planning and Design Institute of Complex Automation in the Petroleum and Gas Industry], although in the spring of 1980, a directive of Minpribor [Ministry of Instrument Making, Automation Equipment, and Control Systems] provided for the creation of the new institute and designated him the manager.

The idea of organizing VNIIkhrom began to circulate some time ago, for the situation in chromatography in recent years has not been very satisfactory. Its development acquired a steady backward-forward character. On the one hand, chromatographic methods of research, based on the subtle division of substances in a special apparatus, the chromatographic instrument, are widely used in industry and, in addition, have opened up unforeseen possibilities for biologists, chemists, and medical specialists. A convincing example can be found in such an example as tobacco smoke put through a chromatographic column, which displays three thousand (!) components. It is no accident that at least ten scientific-research institutes, design bureaus, and enterprises are working on the development and manufacture of such apparatuses. On the other hand, they are subordinate to various agencies, which in itself does not affect the technical level of chromatographic instrument making in the best way. Therefore, the government has to purchase high-cost instruments abroad for leading scientific centers. Although, at the present time, more than 25 types of chromatographic instruments necessary for science and the economy have been created in the country, they all have in common, alas, a low level of design development and manufacture.

This was discussed a year ago at a party meeting in Minpribor devoted to the problem of the further scientific-technical development of instrument making. Well, one can only welcome such a self-critical approach and congratulate any ministry "holding stock in chromatographic instruments" that corrects its own mistakes. But to this ministry is also subordinated VNIIKAneftegaz, which has a significant volume of work tied to chromatography and to the Special Design Bureau for Gas Chromatography (SKB GKh), and factories in Moscow, Orel, and Nal'chik. It was for this reason that the creation of an institute based at the SKB GKh and corresponding subordinate units of VNIIKAneftegaz was perceived as a token of a long-awaited change. And it could happen that VNIIKAneftegaz and VNIIkhrom will wind up being subordinate to various all-union associations (administrations) of one ministry or another.

There was so much of this that the question of transfer from the old institute to the new one of over 200 workers turned into an internal ministerial "court fight." Moreover, discussions of the problem of "to transfer or not to transfer, and, if to transfer, how much to transfer," gradually drew in the collective of VNIIKAneftegaz itself. It is possible that the new institute's receiving a higher category of pay helped pave the way for future discord. It is difficult to see this absolutely objectively, because VNIIKAneftegaz is concerned with no less important scientific problems.

But, be that as it may, the debates continued through spring, summer, autumn . . . The inability of two main administrations to solve the problem in a business-like way led to involvement at the level of deputy ministers and with the management of the scientific-technical administration of the ministry as arbitrator.

Whatever turn events will take on this occasion, I cannot predict that it will cause surprise if, instead of exerting authority, they engage in endless listening to sides and promises. Especially since, in the dust of the arguments over "principles," they let something slip from view: within a month, a whole year would have passed since the organization of VNIIkhrom and it was time to assess the work done during this period. But, besides the order for its creation and its charter, printed on beautiful, glossy paper, and listing the directions for future research, the director of the institute had nothing to show. There was no staff, no bank account was opened, and there was no experimental base. The latter requires explanation.

It is that the experimental factory of VNIIKAneftegaz, where they manufacture chromatographic instruments created by institute designers, is gradually being reoriented toward other products since the decision on the organization of VNIIkhrom. This diplomatically sensitive path follows a single aim: to save the experimental factory under any conditions from currently undesirable chromatographic instruments. But without an experimental base, experimental testing of any scientific idea or design becomes a walk through purgatory, which in no way resembles the torment of creativity. But exactly such an unenviable prospect is taking shape at VNIIkhrom.

Meanwhile, in Moscow there is another factory, also experimental (but in name only), which manufactures chromatographic instruments and is part of the "Manometr" production association, subordinate to the same Minpribor.

In its time, the association was created to increase the output and raise the level of instruments needed by the country, using technical partnership as a powerful lever. But the good intentions up to now have remained good intentions. The partners -- the "Khromatograf" and "Manometr" factories put out, as before, chromatographic instruments and manometers, respectively. The trouble is still that, because of this, "Khromatograf" is tied down by a burden of various types of other kinds if products: gas analyzers, relays, and drainage devices -- these are all on the factory's list of products.

But, most of all, the factory to this day does not have a universal mass model chromatographic instrument capable of replacing the old one that has been produced for over ten years. You see, the efforts of the scientists and designers of the new institute could be directed to this. But what kind of business-like creative situation can you talk about when for many months at a time you don't know whether the next day you may be working in VNIIkhrom or there may be another reorganization of some kind.

Meanwhile, having despaired, the producers, so-called, cast prudence to the winds and, through their own efforts, updated the LKhM8MD so that after state trials they could manufacture an improved type in series. What else could they do if neither the "Biokhrom" nor the "Khrustal' 5002," proposed by designers and even manufactured at the factory in small series, nevertheless did not succeed in moving on to the finals. Neither one nor the other became the basic model. The manufacture of such chromatographic instruments numbers tens because of their high labor content or special-order status and the yearly plan of over ten million rubles for them is not filled.

And all the same, with all of the unsolved problems, "khromatograf" could become indispensable for the new institute in the "science to production" system. But for this it is necessary, first, to reconstruct, after replacing outdated equipment and, secondly, to free it from nonproductive waste of time and effort expended on the manufacture of items that are inconsistent with its mission.

Unfortunately, there are practically no grounds for hoping that it will be this way. Our newspaper has twice (February 1977 and January 1980) written about the unacceptably slow solution of the problems related to creating high-quality chromatographic instruments. In response to the newspaper articles, Minpribor gave optimistic promises to correct the situation in the very near future. However, the factory did not receive any money for rebuilding and, as for products inconsistant with its mission, increased manufacture is planned for next year. In short, factory problems and still vital problems of the yet nonexistent institute are not being solved as rapidly as is required by reality. With astonishing lack of haste, Minpribor from year to year becomes involved with these problems, at times substituting bureaucratic red tape for a business-like operational approach.

In such an instance, what can one consider to be the technical policy of the ministry in the field of chromatography, the necessity for rapid development of which is covered by the following lines in the CPSU Central Committee draft for the 26th CPSU Congress: "To expand the production of instruments and measuring devices for scientific research and for the control of environmental conditions"?

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CSO: 1814

'PRAVDA' EDITORIAL PRESSES FOR IMPROVEMENT OF DESIGN BUREAU WORK

Moscow PRAVDA in Russian 18 Dec 80 p 1

[Editorial: "Science Is the Basis for Progress"]

[Text] "To provide for the further economic progress of society and for deep qualitative changes in the supply and equipment base on the basis of the intensification of civil production, increase in its effectiveness, and the hastening of scientific-technical progress." This is the task stated in the CPSU Central Committee draft for the 26th CPSU Congress. Successes here are inconceivable without continuous concern for the unification of science and production and the strengthening of the influence of progressive ideas on this unification. An important role in this belongs to those who create designs for construction and reconstruction of enterprises and who design machines for the future. For them to take as principle today the newest achievements of science and engineering means to ensure an advanced level of production tomorrow.

The stronger the union of engineers and designers with science, the heavier the fruits of their creativity and the more impressive are the achievements of technical thought. Obvious confirmation of this is the "Salyut-6" station, the space ships "Soyuz T" and "Progress," powerful atomic electric stations, sea vessels, and the delightful Olympic structures.

In accord with the decisions of the 25th CPSU Congress, much has been done for hastening the rate of scientific-technical progress. Our country enters the 1980's possessing powerful economic and scientific-technical potential. Soviet scientists, engineers, inventors, and rationalizers have a large reserve of original ideas. One obvious illustration of this is the registration of the three millionth claim for an invention. Design and development organizations are not only increasing their own contribution to scientific-technical progress, but are persistently pushing forward into practice the achievements of scientists and inventors. For example, in connection with the Novolipetsk wide-strip rolling mill, which was awarded a USSR State Prize for 1980, 264 Soviet inventions were used.

Unfortunately, far from all design bureaus and developmental institutes always propose the most progressive solutions. It happens that plans are sometimes already obsolescent while still in the development stage. Substantiated claims of this are found in many types of products in the transportation, road and construction machine-building industries, in machinery and equipment for petroleum and gas industries and, in light industry and food industry. The technical level of a number of agricultural machines has caused serious censure. Newly constructed enterprises are going into operation and the rebuilding of some factories is being completed, but the share of manual labor in industry is being reduced very slowly. One of the reasons is the lack of attention to mechanization of auxiliary operations on the part of the designers and developers.

A direct obligation of managers and party organizations of design and development institutions is to strive constantly to assure that the fruits of their research are based on advanced ideas and that they all embody the really valuable achievements of indigenous and world-wide scientific-technical thought. For this, we must strengthen the union with science, support a condition of exactness and high responsibility in collectives, and to improve the organization of design and development. Ministries and agencies must regularly examine the work of design and development organizations, make heroes of those whose efforts reflect glory on the technology of the fatherland, and severely criticize shortcomings.

A hopeful lever for raising the quality of scientific-technical solutions is the system set up for expert evaluation at institutes and design bureaus and in economic sectors. The best scientific efforts and most competent institutions must be involved in this. Concepts for especially important and complicated units, machines, or assemblies must undergo expert review from outside the agency, with participation by the USSR State Committee for Science and Technology and the USSR State Committee for Construction Affairs. The usefulness of this can be seen in the following example. Revision in accord with the criticism by an expert commission of the plans for the Volga-Don heavy machine-building plant provided for an increase in product output from the same floor space by 42 percent. It is even more inadmissable that a number of ministries strive to avoid outside evaluations of their products; these, first and foremost, are the ministries for machine-tool and tool building industry, for tractor and agricultural machine building, for heavy and transportation machine building, and for light and food industry. From 1974 to 1979, the USSR State Committee for Science and Technology received only 42 out of 92 project plans on time. It is necessary to improve the practice of expert critique of project plans for enterprises being built, expanded, or redesigned and to subject the level of products designated by them for manufacture to exacting agency and interagency evaluation.

Product quality in large measure is determined at the design and development stage. That is why managers of ministries, agencies, design and development institutions, and their party organizations are called upon to be concerned daily about the training and raising the qualifications of design and development personnel and about the effectiveness of socialist and scientific-technical competition among them, to announce more frequent contests for the best creative concepts, and to conduct civil reviews of the quality of design and development. Enterprises being erected and machines being launched into production must respond to today's and tomorrow's needs for scientific-technical progress.

To meet the level of these needs is not possible without an effectively operating system of scientific and technical and patent and licensing information. Meanwhile, in many design and development organizations, the information supply is poorly provided. Perhaps that is why, for example, although microcomputers are being mass-produced, designers of machines, machine tools, and common and other various types of technology do not rush to use them in new models of their products, having condemned them earlier for being out of date.

The party policy of raising further the people's level of life and the development of material production and increasing its effectiveness has been proved by time and is yielding good fruit. At the October Plenum of the CPSU Central Committee, nevertheless, it was noted that we will be faced even more acutely with the tasks of renewing basic resources and reequipping various spheres of the national economy. The strengthening of the union between science and design-development is a pledge of new successes on the route to the intensification of civil production.

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KIRILENKO, DOLGIKH ATTEND MEETING ON ACADEMY OF SCIENCES' APPLIED R&D

Moscow PRAVDA in Russian 27 Dec 80 p 2

[TASS report: "Science For The National Economy"]

[Text] A meeting of the USSR Gosplan, the State Committee for Science and Technology, and the presidium of the USSR Academy of Sciences was held 26 December in Moscow. It was attended by executives of USSR ministries, state committees and agencies, Party and government organizations, and presidents of the academies of sciences and chairmen of the state planning committees of the Union republics. The meeting was devoted to questions of industrial application of the results of research and development by the USSR Academy of Sciences and the development of the material and technical base of Soviet science in the 11th Five-Year Plan period and up to the year 1990.

The meeting was opened by N. K. Baibakov, deputy chairman of the USSR Council of Ministers and chairman of the USSR Gosplan.

President of the USSR Academy of Sciences A. P. Aleksandrov reported on problems of accelerating scientific developments and introducing their results in industry.

Follow-up reports by Vice-Presidents of the USSR Academy of Sciences V. A. Kotel'nikov, Yu. A. Ovchinnikov and Ye. P. Velikhov, and by Minister of the Chemical Industry V. V. Listov dealt with introduction of the results of basic research into the economy.

Reports were delivered by Academicians I. A. Glebov, N. S. Yenikolopov, A. A. Bayev and G. K. Skryabin, Corresponding Members of the USSR Academy of Sciences M. M. Koton and A. I. Manokhin, USSR Minister of Power Engineering and Electrification P. S. Neporozhniy, and R. S. Rychkov, head of the Main Administration of the Microbiology Industry (Glavmikrobioprom).

The meeting, as well as an exhibition of the achievements of the USSR Academy of Sciences organized in the USSR Gosplan, was attended by comrades A. P. Kirilenko, N. A. Tikhonov and V. I. Dolgikh, and Deputy Chairmen of the USSR Council of Ministers A. K. Antonov, I. I. Bodyul, L. A. Kostandov, I. T. Novikov, L. V. Smirnov and N. V. Talyzin.

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